



Express Mail Receipt No. ED638707917US
Deposited on August 22, 2005

PATENT
Dkt. STL11874

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: **Stephen J. Sicola and Charles M. Sander**
Assignee: **SEAGATE TECHNOLOGY LLC**
Application No.: **10/817,617** Group No.: **2154**
Filed: **April 2, 2004** Examiner: **Unknown**
For: **MANAGED RELIABILITY STORAGE SYSTEM AND METHOD**

Mail Stop Petition
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

PETITION TO MAKE SPECIAL FOR NEW APPLICATION
UNDER M.P.E.P. § 708.02, VIII

1. Petition

Applicant hereby petitions to make this new application, which has not received any examination by the Examiner, special.

2. Claims

All the claims in this case are directed to a single invention. If the Office determines that all the claims presented are not obviously directed to a single invention, then applicant will make an election without traverse as a prerequisite to the grant of special status.

3. Search

A search has been made by attorney and professional searcher in the following:

Field of search: **Data Processing**
Class/Subclass
705/009

Computers
Class/Subclass
710/006

Memory
Class/Subclass
711/118

Errors
Class/Subclasses
714/020, 026 & 047

A copy of the search report from Mark Spector, professional searcher, is submitted herewith.

4. Copy of references

All of the references most closely related to the subject matter encompassed by the claims are listed in the Information Disclosure Statement which accompanies this Petition, in accordance with M.P.E.P. 708.02VIII(D).

Also included with the Information Disclosure Statement is Form PTO/SB/08A (substitute for PTO-1449) and copies of the references listed therein.

5. Detailed discussion of the references

There is submitted herewith a detailed discussion of the references, which discussion particularly points out how the claimed subject matter is distinguishable over the references.

Also attached is an Information Disclosure Statement.

6. Fee

The fee required by 37 C.F.R. 1.17(h) \$130.00 is to be paid by:

Authorization is hereby made to charge the amount of \$130.00 to Credit card as shown on the attached credit card information authorization form PTO-2038.

Charge any additional fees required by this paper or credit any overpayment to Deposit Account No. 06-0540. A duplicate of this paper is attached.

Date: _____

8/22/2005

Respectfully submitted,



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Mitchell K. McCarthy, Registration No. 38,794
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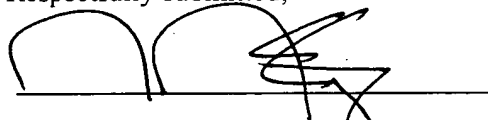
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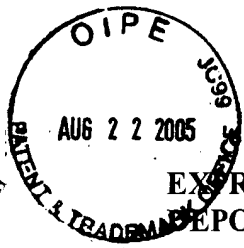
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Date: 6/22/2005

Respectfully submitted,



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DETAILED DISCUSSION OF THE REFERENCES IN SUPPORT OF
PETITION TO MAKE SPECIAL FOR NEW APPLICATION
UNDER M.P.E.P. § 708.02, VIII

Sir:

In accordance with a Preliminary Amendment filed herewith, the embodiments of the present invention as claimed can be at least characterized without limitation by the following recited features:

Independent Claim 42

A method comprising steps of proactively monitoring for an occurrence of an event associated with operation of a distributed data storage system, characterizing the event as a usage event related to a usage rate of said system or a non-usage event not related to a usage rate of said system, adjusting a parameter of the data storage system when the event is characterized as a usage event, and executing a diagnostic routine when the event is characterized as a non-usage event. (Claim 42, emphasis added)

Independent Claim 55

A distributed data storage system comprising at least one processor having associated programming to proactively monitor for an occurrence of an event associated with

operation of said system, to characterize the event as a usage event related to a usage rate of said system or a non-usage event not related to a usage rate of said system, to adjust a parameter of the data storage system when the event is characterized as a usage event, and to execute a diagnostic routine when the event is characterized as a non-usage event. (Claim 55, emphasis added)

Independent Claim 69

An apparatus comprising a distributed data storage system comprising a host system, a storage controller, a plurality of data storage devices, and first means for proactively monitoring for an occurrence of an event associated with operation of a distributed data storage system, for characterizing the event as a usage event related to a usage rate of said system or a non-usage event not related to a usage rate of said system, for adjusting a parameter of the data storage system when the event is characterized as a usage event, and for executing a diagnostic routine when the event is characterized as a non-usage event. (Claim 69, emphasis added)

It is respectfully submitted that none of the references of record disclose, teach or suggest the claimed apparatus and method as featured by claims 42-70.

U.S. Patent No. 6,766,416 to Bachmat (“Bachmat ‘416”) discloses a data processing system 30 for a disk array comprising disc drive data storage devices 31. Reading and writing operations to various logical volumes of the array are monitored to accumulate usage statistics, and a logical volume pair exchange is made in response thereof to more evenly balance activity among the respective devices 31.

U.S. Patent No. 6,680,806 to Smith (“Smith ‘806”) discloses a data storage system with disk drive 11, drive controller 19 and host controller 45. The drive controller 19 monitors a head-disk interface within the drive 11 for a degradation condition, and upon detection of the same implements one or more adjustments to prolong the onset of drive

failure. Such adjustments include increasing the internal pressure of the drive, adjusting disc rotational velocity, reducing seek velocities, and increasing error retry attempt levels.

U.S. Patent No. 6,628,994 to Turicchi, Jr. et al. (“Turicchi ‘994”) discloses a computer system in which parameter values are automatically selected to improve system performance in relation to changes in system workload levels. The parameters are selected as being both adjustable and as being believed to influence system performance. The parameters are maintained in a list and each is initially assigned a status of “unelected.” In turn, the parameters are selected and incremented, system performance is measured, and this process continues until a final value for the parameter is established.

U.S. Patent No. 6,249,890 issued to Ukani et al. (“Ukani ‘890”) discloses a data storage device 100 having a head 120 adjacent a storage medium 106. A processor 132 stores a baseline level for a selected readback response characteristic of the head, such as electrical resistance, readback signal amplitude, asymmetry or nonlinearity. The processor 132 periodically determines a subsequent level for the readback response characteristic and predicts the possibility of a future failure of the device in relation to a change in the subsequent level as compared to the baseline level. The processor further takes appropriate corrective actions as required in relation to the determined possibility of future failure.

U.S. Patent No. 6,018,432 issued to Ukani (“Ukani ‘432”) discloses a data storage device 100 with a communication channel 146 and servo loop 144 which operate to facilitate the transfer of data between a transducer 118 adjacent a medium 108 and a host device 140. Compensation routines are performed to device parameters in accordance with existing environmental conditions during an idle mode of operation. A table sets forth an order for the execution of the various compensation routines, and this table is reordered so

that the routines are subsequently performed in a different order.

U.S. Published Patent Application No. US2005/0033625 A1 to Kline (“Kline ‘625”) discloses a distributed computing environment 100 with multiple computing domains 110-114 each having a server 120 and a client 122. A parameter is monitored to detect the need to perform at least one maintenance task, and at least one maintenance task is performed when the monitoring detects the need to perform said task or within a predetermined time period.

It is respectfully submitted that all of the above references, as well as the remaining references of record, are silent with regard to proactively monitoring for an occurrence of an event associated with operation of a distributed data storage system, characterizing the event as a usage event related to a usage rate of said system or a non-usage event not related to a usage rate of said system, adjusting a parameter of the data storage system when the event is characterized as a usage event, and executing a diagnostic routine when the event is characterized as a non-usage event, as generally featured by claims 42-70.

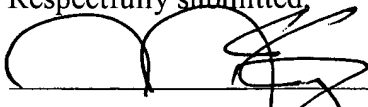
Moreover, one skilled in the art would not be motivated from the above references or the remaining references of record, alone or in combination, to arrive at the claimed subject matter or at an obvious variant thereof. The claimed subject matter as set forth by claims 42-70 thus represents a patentably distinct improvement over the art of record.

It is submitted that all of the elements set forth in M.P.E.P. §708.02 subsection VIII have now been provided in this petition to make special.

It is requested that this petition be granted and that the presented claims be examined as soon as possible.

Respectfully submitted,

By: _____


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